


HOLLY RIDGE, NORTH CAROLINA
COASTAL AREA MANAGEMENT ACT LAND USE PLAN

FOR SUBMISSION TO
THE COASTAL RESOURCES COMMISSION
MAY 21, 1976

HD
211
.N8
H65
1976



HD 211. N8 H65 1976

RESOLUTION TO ADOPT COASTAL AREA MANAGEMENT ACT
LAND USE PLAN FOR THE TOWN OF HOLLY RIDGE

Whereas, the Town is a community within the jurisdiction of the Coastal Area Management Act and has chosen to prepare its own land use plan as required by the Act, and;

Whereas, the plan has been prepared by the citizens of Holly Ridge, now;

Therefore, be it resolved by the Town Council of the Town of Holly Ridge,

That the Land Use Plan prepared under the Coastal Area Management Act is hereby adopted for submission to the Coastal Resources Commission for their review and approval.

Patricia McLamb
Patricia McLamb, Town Clerk

A. P. Snodgrass
A. P. Snodgrass, Mayor
May 10, 1976

TOWN OF HOLLY RIDGE
Land Use Plan Synopsis

The value of North Carolina's extensive shoreline prompted the General Assembly to pass the Coastal Area Management Act of 1974. Each of the twenty coastal counties is required to prepare an individual land use plan which "reflects the desires, needs, and best judgement of the citizens residing within its boundaries. When completed these twenty individual land use plans will form the basis for a comprehensive plan for the protection, preservation, orderly development, and management of the coastal area of North Carolina; which is the primary objective of the Coastal Area Management Act of 1974."

Even though Holly Ridge is not a beach community, nor does it have any environmentally sensitive areas, it is recognized as an important part of the coastal area where prudent and responsible development must occur. Therefore, Holly Ridge is among the towns preparing a land use plan as a basis for orderly growth and protection of its natural resources. The following is a synopsis of the land use plan. The material mentioned in the synopsis is discussed in further detail in the land use plan which can be obtained from the Holly Ridge Town Hall.

Numerous efforts were made by the Town to arouse public interest and participation in the land use plan. Notice of public meetings were made in newspapers, newsletters, personal letters and announcements in local churches. However, attendance at the three public meetings held was very low. Personal interviews and a survey mailed to all water users in the Town were used in addition to public meetings, to find out citizen opinion on land use problems and issues. These opinions were used to formulate a statement of goals and objectives for Holly Ridge.

Holly Ridge's citizens enjoy the peacefulness and friendliness of their town. Most of its inhabitants were born and raised in the area and they have chosen to remain in Holly Ridge to be near their friends and family. While the people of Holly Ridge desire to maintain this small town atmosphere, they also recognize the need to plan for orderly develop-

ment. The Town has experienced a population loss over the past years which is expected to continue as evidence by its population and economic trend. The lack of employment opportunities is forcing the younger citizens to turn to the larger cities in the area for work. Relocation usually accompanies employment in a larger city.

Adequate retail service and medical and recreational facilities are also lacking in Holly Ridge. Wilmington, which is thirty miles away; and Jacksonville, twenty miles away, are the closest cities which can provide these services.

The Town's wastewater treatment facility is inadequate for current demands. Broken sewer lines sometimes cause unpleasant conditions. King's Creek, located south of Holly Ridge is being polluted due to effluent discharge from a broken collection line at the treatment plant. The entire sewer system is old and in need of repair.

Concern has been expressed by the citizens about the vacant and deteriorating buildings scattered throughout the Town. They are an "eyesore" and serve no useful purpose.

From the views expressed by the citizens, some specific goals and objectives were formulated to aid Holly Ridge in its land development. The alternative to pursuing the following goals is to do nothing. For clarification, the frequently used terms of goal, objective and policy are defined as follows:

goal-a desired future condition

objective-a task or course of action to be performed

policy-a commitment to action to reach a goal

Goal: Develop the potential for industrial development

Objectives

- specify sites available for industries to locate
- work with Onslow County Development Commission and the Economic Developer with the North Carolina Department of Natural and Economic Resources in finding industries interested in locating in the area
- reactivate the Governor's Award Committee in Holly Ridge
- adequate wastewater treatment facilities must be provided to attract economic development

Goal: Provide adequate retail shopping services

Objectives

- encourage the utilization of existing vacant buildings
- tear down old and structurally deficient store buildings
- develop small shopping center in scale with the Town

Goal: Develop medical and recreational facilities to serve the community

Objectives

- construct Medical Clinic and employ staff to provide basic medical services
- establish committee to define recreational needs and initiate citizen interest and participation in a course of action
- work in conjunction with Onslow County Recreation Department in establishing recreational facilities

Goal: Provide adequate and efficient community facilities

Objectives

- replace broken sewer lines
- update wastewater treatment plant
- appoint committee to work with Onslow County Board of Education in improving Dixon Elementary School

Goal: Encourage safe and decent housing for all citizens

Objectives

- aid homeowners in the demolition of homes unfit for human habitation
- cooperate with Onslow County Inspection Department in enforcing State electrical and plumbing codes
- request assistance of the Farmers Home Administration 502 Housing Program to buy, build, improve, repair or rehabilitate homes

Goal: Initiate citizen interest in community problems

Objectives

- organize a Community Development Committee
- organize program to clean up the Town and make it more attractive

Data Collection and Analysis

PRESENT CONDITIONS

Population

The population of Holly Ridge dropped from 731 in 1960 to 415 in 1970. It should be noted that except for a sharp increase in the 15 to 24 year old age group (which is probably the result of the post-war baby boom), only the oldest age group (45 and older) are increasing relative to the total population. Stump Sound Township, in which Holly Ridge is located, has shown a 1.1% increase in population since 1960.

Economy

Located just outside the Town limits are two manufacturing operations which employ a large segment of Holly Ridge's population. The largest employer is Carolina Meat Processors, which employs 230 people in bacon production; and the second is Holly Ridge Foods which employs 35 people in the production of fruit pies for fast food retail chains. Approximately 30 to 40 people are employed in civil service jobs associated with nearby Camp LeJeune.

Independent retail trade is also an important factor in the economy. Due to the relationship of the Town with U. S. Highway 17, there are two markets for these retail trades and services. One is the service provided to passing motorists and the other is the local market.

Existing Land Use

An existing land use map is presented on the following page. Past development trends and patterns are recognized with the aid of the map.

The map was prepared from a field survey conducted in May 1975. Following the survey, the land uses identified in the field were classified into six basic categories.

The following table lists each category, its acreage and percent of the total.

<u>Category</u>	<u>Acreage</u>	<u>Percent</u>
Residential		
-- Single Family	29	11
-- Multi-Family	22	8
Commercial	6	2
Government & Institutional	3	1
Transportation, Communication & Utilities	77	30
Cultural, Entertainment & Recreation	.2	.07
Undeveloped	122	47
Total	259	100%

CONSTRAINTS

Physical Limitations

Under the requirements of the Coastal Area Management Act, it is required that an identification shall be made of areas having conditions that would make development costly or that would create an undesirable effect if developed. Soil limitations and sources of water supply are the major concerns in determining physical limitations for development.

Soils

Holly Ridge occupies land dominated by a soil association consisting primarily of the Lynn Haven and Leon series. This soil series poses no serious problems for Holly Ridge's development, however, it is advisable to spot test any site for soil suitability before construction begins.

Source of Water Supply

Holly Ridge's water is supplied by three wells located within the city limits. There are no problems with the quantity or quality of the water which those wells supply, although the overlying aquifers will be subjected to degradation from future development.

Areas with Resource Potential

West of U. S. Highway 17, adjacent to Holly Ridge, lies a natural and scenic area known as the Great Sandy Run Pocosin. This 63 square mile flat, swampy region has native trees of pond pine and scrub oak. It is presently used for forestry and big game hunting.

CAPACITY OF COMMUNITY FACILITIES

Water and Sewer Distribution System

As of January 31, 1974, Holly Ridge's peak load on the water system was 240,000 gallons per day on a system with 360,000 gallons per day design capacity. There is, therefore, a substantial surplus availability of water in Holly Ridge at the present time. Water is supplied by two wells at present and if necessary, the Town has access to several additional wells in the immediate vicinity.

The sewer system for Holly Ridge was installed during 1943 and 1944 as a Public Works Project while the United States Army operated Camp Davis adjacent to the Town. The Camp Davis area, as well as Holly Ridge, is serviced by the lines. Within the Town limits, the system consists of approximately 1.5 miles of 8", 10" and 12" primary gravity collector lines constructed of vitrified clay pipes. Overall, the system is in poor condition due primarily to its age and lack of maintenance.

Wastewater Treatment

When operable, Holly Ridge's wastewater treatment facility is inadequate for current domestic and industrial demand. The condition of the existing facility is extremely poor. Overloading and lack of maintenance results in discharge of poorly treated sewage into King's Creek. This discharge has apparently caused widespread pollution of King's Creek and the sound which King's Creek drains into, Stump Sound. These areas have been classified as "SC-Swamp" by the State Division of Environmental Management. This classification closes the water to shellfishing and body contact activities by humans.

Schools and Roads

Holly Ridge's children attend county schools; and therefore, do not qualify as an existing community facility in the planning area. However, there has been much concern expressed over the inadequacy of the school facilities serving the Holly Ridge area -- notably Dixon Elementary School.

There are 73.6 acres of road right-of-way in Holly Ridge of which 39.7 acres are unpaved. The improvement and maintenance of most of these roads are the community's responsibilities.

ESTIMATED DEMAND

Population

Attempting to predict the future is not easy but if past trends continue (a 37% loss in population every ten years) there will be only 259 people living in Holly Ridge in 1985 and the Town would be vacant in 2085. The reliability of this projection is questionable because of the small data base. Nevertheless, this plan proposes to counter the present trend.

The people of Holly Ridge have expressed concern over this loss of population and have resolved to begin a positive program to reverse this trend by pursuing their goals and objectives. Thus, it seems more likely that Holly Ridge will grow at the same rate as surrounding Stump Sound Township which has experienced a 12.5% increase per decade. If this is true, the population of Holly Ridge will increase to 467 by 1985 and after 50 years the population will be 748.

Economy

Two small industries located in the Holly Ridge area in the early 1970's. The development of an improved wastewater system is expected to attract more industry and retail business to Holly Ridge.

Future Land Needs

The most evident characteristic of Holly Ridge as seen from the existing land use map is that most of the Town is undeveloped. Since Holly Ridge has expressed the desire to maintain its present character even in the event of increased economic activity, it seems appropriate to encourage development in the undeveloped areas in the same proportions as in the developed area. This would increase the density of the Town at the expense of maintaining its exact character, but the overall effect would not be too drastic and would begin to accomplish the goal of developing areas in Town without requiring expansion.

The total land area for Holly Ridge is 259 acres, of which 137 is developed and 122 acres is undeveloped. The following table lists the present acreage of each land use category and its percentage of the developed area. Also shown is the additional acreage needed for the future if each category is developed by its present percentage.

<u>Land Use</u>	<u>Present Acreage and %</u>	<u>Additional Acreage and %</u>
Residential		
Single Family	29 (21%)	26 (21%)
Multi-Family	22 (16%)	19 (16%)
Commercial	6 (5%)	6 (5%)
*Transportation, Communication and Utilities	3 (2%)	3 (2%)
Government and Institutional	3 (2%)	3 (2%)
Cultural, Entertainment and Recreation	.2 (.1%)	.2 (.1%)

* Street right-of-way acreage was excluded from Transportation, Communication and Utilities category in this table because present acreage is considered adequate for future growth.

This development plan would leave 65 acres still undeveloped in the Town which can be dedicated to a new use, added to the existing land uses or set aside in a holding category until a need is seen for development.

Community Facilities Demand

To meet the needs that future development will demand, Holly Ridge must extend some of its basic services. Water and sewer facilities should be available to all residents. The wastewater treatment plant is inadequate to meet present needs, therefore, it definitely will not be able to handle the additional waste that accompanies development. A 201 Facilities Plan is being drafted by Henry von Oesen and Associates containing specific recommendations for the construction of an economically acceptable and environmentally sound wastewater treatment plant. The estimated cost of a proposed wastewater treatment system has been as high as \$650,000 with the local share being as high as \$200,000. Due to this high cost, other methods of wastewater treatment are being looked into.

LAND CLASSIFICATION

The State Guidelines for Local Planning in the Coastal Area under the Coastal Area Management Act of 1974 requires that a land classification map be prepared for all planning jurisdictions in the coastal area. The North Carolina Land Classification System is being used which categorizes land into five different classes: Developed, Transition, Community, Rural and Conservation.

Holly Ridge has a density of 3.03 persons per acre in its developed acres. This is just short of the 3.124 persons per acre required for the Developed category, but it is felt to be close enough to qualify. All lands projected for future development in Holly Ridge are classified in the Transition Class. The remaining land will be designated into one of the other three categories at a time when new development patterns emerge.

Areas of Environmental Concern

Areas of Environmental Concern include marshlands, beaches, sand dunes, navigable waters, national and State parks and areas of historical importance. None of these areas exist within the Town limits of Holly Ridge.

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Soils

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Source of Water Supply

Holly Ridge's water is supplied by three wells located within the city limits. There are no problems with the quantity or quality of the water which those wells supply, although the overlying aquifers will be subjected to degradation from future development.

Areas with Resource Potential

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HOLLY RIDGE, NORTH CAROLINA
COASTAL AREA MANAGEMENT ACT LAND USE PLAN

PREPARED BY

HOLLY RIDGE TOWN COUNCIL

A. P. SNODGRASS, MAYOR

K. E. HOWARD

E. F. FISHER

W. H. AKINS

MARY E. PINER

GREG HINES

TECHNICAL ASSISTANCE PROVIDED BY

STATE OF NORTH CAROLINA
DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES
LOCAL PLANNING AND MANAGEMENT SERVICES SECTION
SOUTHEASTERN FIELD OFFICE

JOHN J. HOOTON, CHIEF PLANNER
MELBA THOMPSON, PROJECT PLANNER

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I. Introduction

North Carolina's coastal lands and waters are among the state's most valuable resources. The coastal area, and in particular the estuaries, are among the most biologically productive regions of this state and of the nation. The area has an extremely high recreational and esthetic value which should be preserved and enhanced.

Increasing industrial development and population are threatening the beauty and resources of the coastal area as we know them today. The value of the state's extensive shoreline, therefore prompted the North Carolina General Assembly to pass the Coastal Area Management Act of 1974. The Act is a state law which requires each of the twenty coastal counties to prepare a land use plan which will guide its future growth and reflect the "desires, needs, and best judgment of the citizens residing within its boundaries". When completed, each individual plan will be a part of a "comprehensive plan for the protection, preservation, orderly development, and management of the coastal area of North Carolina", which is the main objective of the Coastal Area Management Act of 1974.

State level administration and coordination will be handled by the Department of Administration and Department of Natural and Economic Resources. The Act creates two citizen agencies:

Coastal Resources Commission - The Commission is a 15-member body appointed by the Governor. All members are residents of the coast. Twelve were chosen from among nominees made by counties and towns in the coastal area. Three are appointed at the discretion of the Governor. The Commission is responsible for establishing planning guidelines, approving land use plans and issuing permits for construction when required.

Coastal Resources Advisory Council - The Council is a 45-member body made up of locally appointed representatives from each coastal county, plus representatives from six state government departments. It includes a broad

cross section of coastal interests. The Council advises the Commission on those matters before the Commission, and assists local governments.

There are three major land use management tools created by the bills: Land use plans, areas of environmental concern and a permit system.

1. Land Use Plans - Each county will prepare a land use plan. The plans will be based on the goals of the people in the county, the resources available in the county, and the most reasonable path for reaching toward these goals with the resources available. After the plans are adopted, use of the land must agree with the plans.
2. Areas of Environmental Concern - These areas and their boundaries will be designated by the Coastal Resources Commission. We know from experience to be cautious when using these areas. They include marshlands, beaches, sand dunes, navigable waters, national and state parks and areas of historical importance. Designation of an area as one of environmental concern does not prohibit use of that area. It is a warning sign to be careful.
3. Permit System - Any development within an area of environmental concern must have a permit. The Act does not require permits for development outside areas of environmental concern. The Act requires the following projects in areas of environmental concern to obtain a permit from the Coastal Resources Commission: those projects currently needing state permits; those of greater than 20 acres in size; those that involve drilling or excavating natural resources on land or underwater; those which involve construction of one or more structures having an area in excess of 60,000 square feet will require a permit from the Coastal Resources Commission. Local governments will establish regulations for what types of developments in areas of environmental concern will need permits from them.

Even though Holly Ridge is not a beach community, nor does it have any environmentally sensitive areas, it is recognized as an important part of the coastal

area where prudent and responsible development must occur. Therefore, Holly Ridge is among the towns preparing a land use plan as a basis for orderly growth and protection of its natural resources. Holly Ridge's citizens enjoy the peacefulness and friendliness of their Town. Most of its inhabitants were born and raised in the area, and they have chosen to remain in Holly Ridge to be near their friends and family. While the people of Holly Ridge desire to maintain this small town atmosphere, they also recognize the need to plan for orderly development.

II. Present Conditions

A. Population and Economy

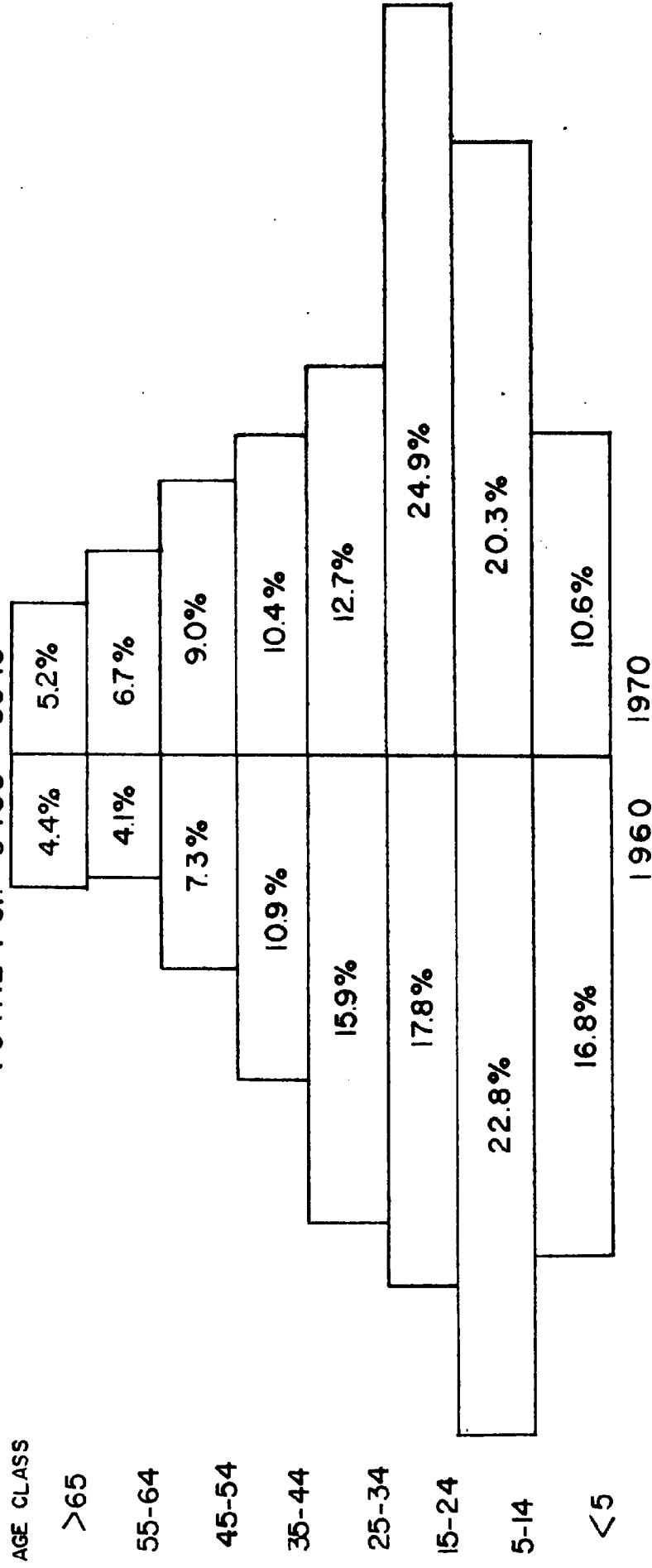
Due to the incomparability of 1960 and 1970 U. S. Census data for small communities, a population analysis of the Town of Holly Ridge cannot be done in as an objective a fashion as might be desired. However, some trends may be illustrated by looking at township data. Stump Sound Township has shown a 1.1% increase in population since 1960 so the overall population seems to be stabilizing itself. However, an analysis of the age-group breakdown doesn't indicate a healthy situation. Except for a wave of people in the 15 to 24 year old age group (which are most probably a result of the post-war baby boom) only the oldest age groups (45 and older), are increasing relative to the total population. This type of age distribution is reflected in Holly Ridge in that a larger percent of the population of the Town is over 14 than under by 2 to 1. This lack of children is a direct indicator of low child production by those in the childbearing ages which in Holly Ridge composes 54.1% of the population.

Another significant factor affecting Holly Ridge's population is the existence of Camp LeJeune Marine Base above the town. Many married marines find temporary housing in Holly Ridge, and then move on to permanent quarters nearer to the base out of town. Also, when Camp Davis Military Base closed down adjacent to Holly Ridge, a large segment of the population was lost.

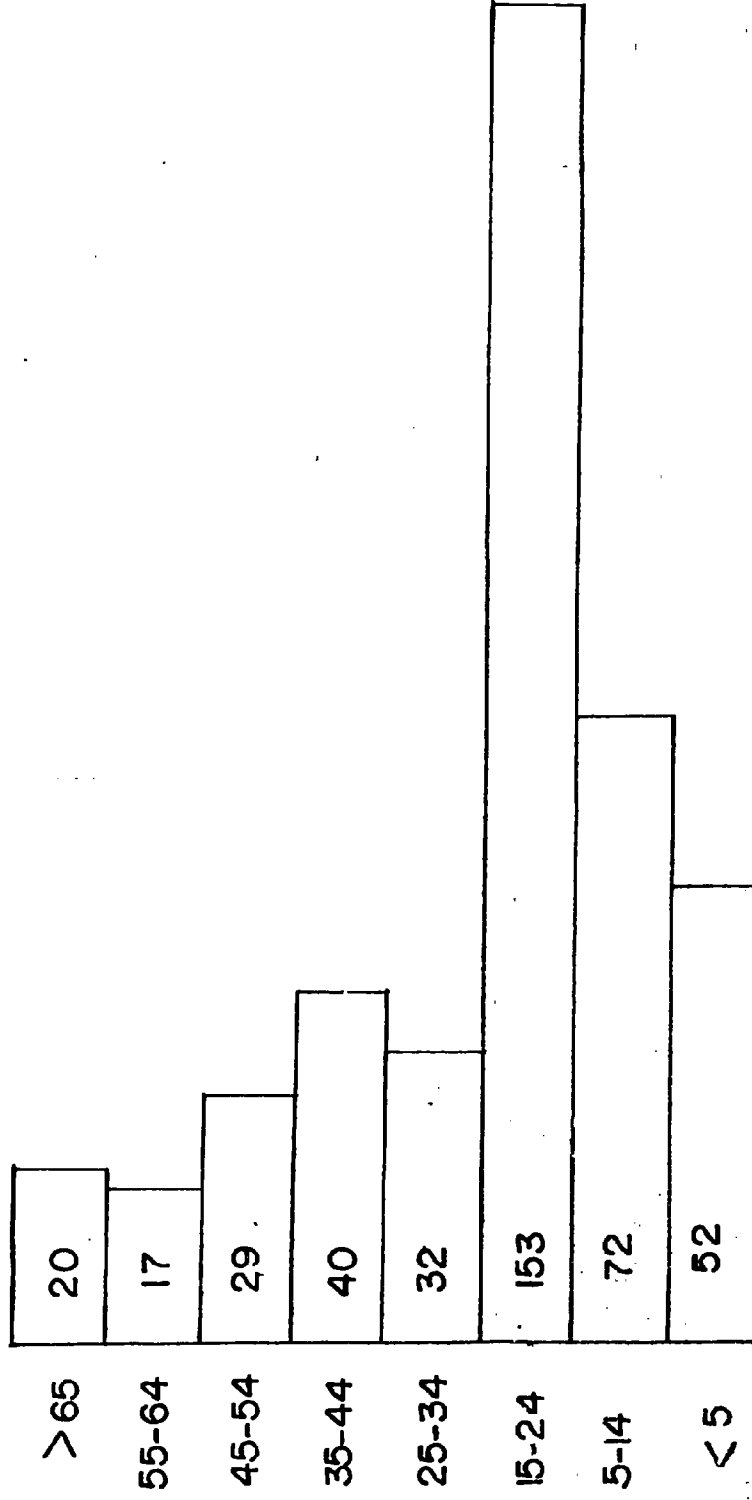
Taking a more optimistic view, however, it should be noted that Holly Ridge is located on the western edge of an area of land that could possibly develop to accommodate moderate to high density uses in the next ten years. This area of Onslow County from the coast west to Highway 17, in the event of an economic upturn, would seem to be a prime area for such growth. Of course, it is impossible to predict all the consequences of this, but in the event of such development, Holly Ridge would probably feel the pressure that it needs to grow.

The small size of Holly Ridge makes an economic analysis difficult to do due to the lack of information available on economic characteristics of very small towns. However, it is felt that the county data compiled by the Onslow

TOTAL POP 5486 5545



STUMP SOUND
TOWNSHIP
POPULATION DISTRIBUTION



HOLLY RIDGE POPULATION
DISTRIBUTION
1970

(TOTAL POP. 415)

County Planning Department gives an adequate overview of the economic forces affecting Holly Ridge. Consequently, a brief description of the major employers and economic activities is given.

The main farming regions in the County are near Richlands, Sneads Ferry and in the North Central section of Onslow. Holly Ridge is bounded by forest land and a few residences, but no farms and there are no farmers living in the town.

The largest employer in Holly Ridge is Carolina Meat Processors which employs 234 people in bacon processing. The only other manufacturing operation in the town is Holly Ridge Foods; they employ 35 people in the production of fruit pies for most of the fast food retail chains. Also, 30 to 40 people are employed in civil service jobs associated with Camp LeJeune.

One of the significant characteristics of Holly Ridge, however, is the large proportion of independent retailers in the town. Due to the relationship of the Town with U.S. 17, there are two markets for these retail trades and services. One, of course, is the services provided to passing motorists and the other is the local market. Included in this category of employment are a couple of service stations, a barber shop, grocery stores and a crafts shop, a fabric shop, the bank and a used car dealership. Although the meat processor and pie plant are significant employers, Holly Ridge's economy, like that of many small towns, is extremely dependent on the ability of the townspeople to provide trade services for each other.

B. Existing Land Use

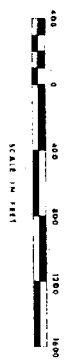
An existing land use map of Holly Ridge has been prepared from a field survey which was conducted in May of 1975. Past development trends and patterns are recognized with the aid of the map. The most evident characteristic of Holly Ridge as seen from the map is that a large portion of the Town is undeveloped. Of the total land area of 259 acres, only 137 acres are developed. The following table lists each land use category, its acreage and percent of the total.

<u>Existing Land Use</u>		
<u>Land Use</u>	<u>Acreage</u>	<u>Percent</u>
Residential		
Single Family	29.33	11.32
Multifamily	21.49	8.3
Commercial	6.3	2.43
Government & Institutional	3.2	1.24
Transportation, Communication & Utilities	76.7	29.61
Cultural, Entertainment & Recreation	.18	.07
Undeveloped	<u>121.82</u>	<u>47.03</u>
Total	259	100%

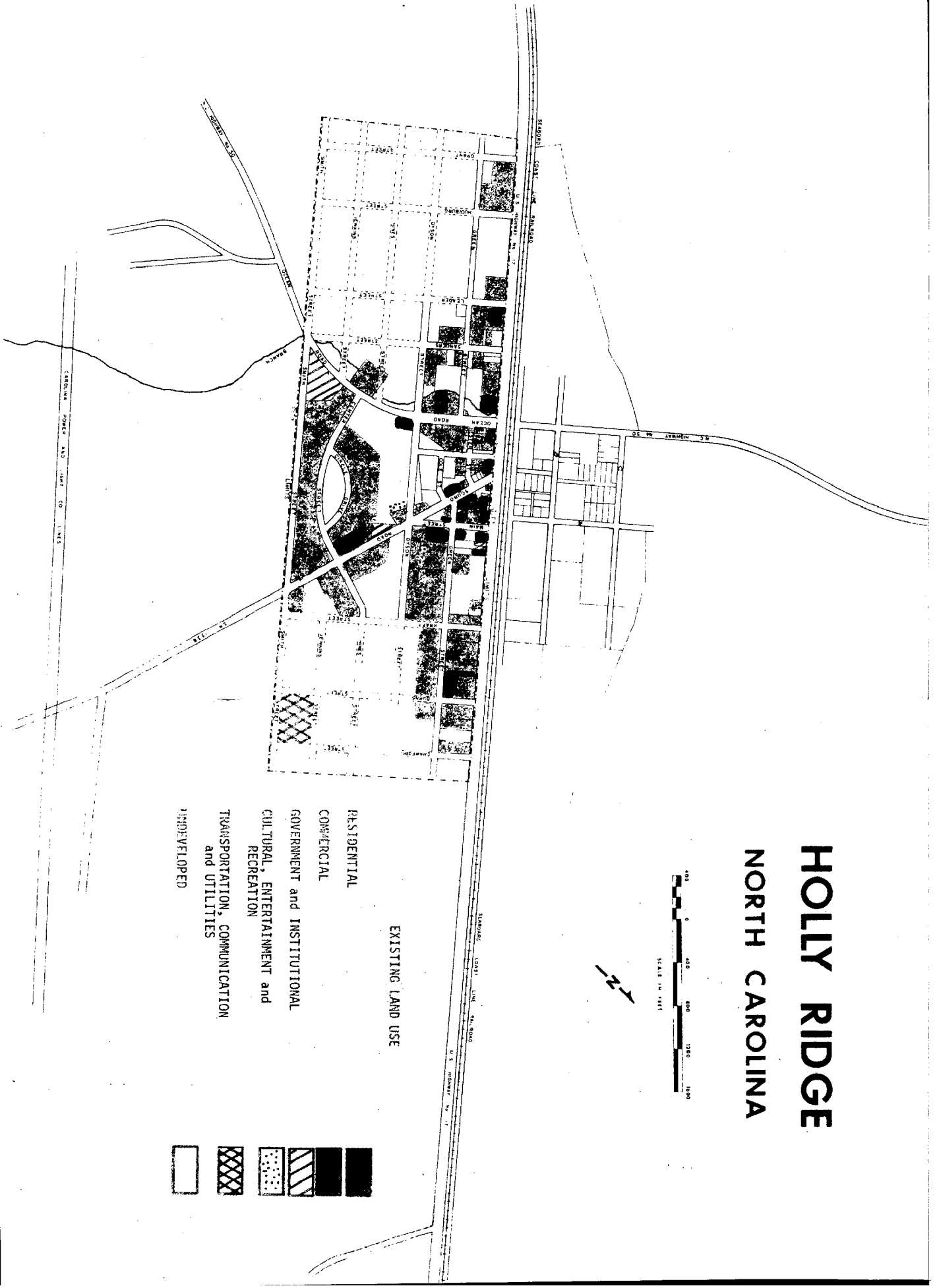
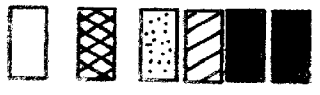
C. Current Plans, Policies and Regulations

Holly Ridge is currently working on a 201 Facilities Plan to upgrade their sewerage treatment plant through the consulting engineering firm of Henry von Oesen and Associates of Wilmington, N. C.

HOLLY RIDGE NORTH CAROLINA



- EXISTING LAND USE
- RESIDENTIAL
 - COMMERCIAL
 - GOVERNMENT and INSTITUTIONAL
 - CULTURAL, ENTERTAINMENT and RECREATION
 - TRANSPORTATION, COMMUNICATION and UTILITIES
 - UNDEVELOPED



III. Public Participation Activities

A. Identification and Analysis of Major Land Use Issues

Holly Ridge's citizens enjoy the peacefulness and friendliness of their town. Most of its inhabitants were born and raised in the area and they have chosen to remain in Holly Ridge to be near their friends and family. While the people of Holly Ridge desire to maintain this small town atmosphere, they also recognize the need to plan for orderly development. The Town has experienced a population loss over the past years which is expected to continue as evidenced by its population and economic trends. The lack of employment opportunities is forcing the younger citizens to turn to the larger cities in the area for work. Relocation usually accompanies employment in a larger city.

Adequate retail services and medical and recreational facilities are also lacking in Holly Ridge. The few retail stores which are located in the Town offer little variety. Shopping trips to Wilmington, which is thirty miles away; and Jacksonville, which is twenty miles away, are necessary to fulfill a shopper's needs. The same situation applies for medical services, although a regional health clinic is proposed for Holly Ridge and the surrounding areas. Recreational facilities are limited to school related activities which are located outside of the Town Limits. Additional entertainment for the young must be sought elsewhere.

A very pressing problem facing the Town is the inadequate wastewater treatment facility which services Holly Ridge. Kings Creek, located south of Holly Ridge, is being polluted due to effluent discharge from the treatment plant. The entire system is old and in need of repair or even possibly a totally new system.

Concern has been expressed by the citizens about the vacant and deteriorating buildings scattered throughout the town. They are an "eyesore" and serve no useful purpose. These deteriorated buildings give the entire town a rundown appearance.

B. Alternative

From the views expressed by the citizens, some specific goals and objectives were formulated to aid Holly Ridge in its land development. The alternative to pursuing the goals which appear in Section C is to do nothing.

C. Goals and Objectives

For clarification, the terms goal, objective and policy are defined as follows:

goal-----a desired future condition

objective--a task or course of action to be performed

policy-----a commitment to action to reach a goal

Goal: Develop the potential for industrial development

Objectives--specify sites available for industries to locate

- work with Onslow County Development Commission and the Economic Developer with the North Carolina Department of Natural and Economic Resources in finding industries interested in locating in the area
- reactivate the Governor's Award Committee in Holly Ridge
- adequate wastewater treatment facilities must be provided to attract economic development

Goal: Provide adequate retail shopping services

Objectives--encourage the utilization of existing vacant buildings

- tear down old and structurally deficient store buildings
- develop small shopping center in scale with the town

Goal: Develop medical and recreational facilities to serve the community

Objectives--construct Medical Clinic and employ staff to provide basic medical services

- establish committee to define recreational needs and initiate citizen interest and participation in a course of action
- work in conjunction with Onslow County Recreation Department in establishing recreational facilities

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--update wastewater treatment plant

--appoint committee to work with Onslow County Board of Education in improving Dixon Elementary School

Goal: Encourage safe and decent housing for all citizens

Objectives--aid homeowners in the demolition of homes unfit for human habitation

--cooperate with Onslow County Inspection Department in enforcing State electrical and plumbing codes

--request assistance of the Farmers Home Administration 502 Housing Program to buy, build, improve, repair or rehabilitate homes

Goal: Initiate citizen interest in community problems

Objectives--organize a Community Development Committee

--organize program to clean up the town and make it more attractive

D. Methods for Securing Public Participation

The goals and objectives formulated for the Town of Holly Ridge were the result of the desires and wishes expressed by the citizens of Holly Ridge. Brochures, newsletters, personal letters, and articles in the Jacksonville newspaper, "The Daily News", were employed to inform local citizens about the Coastal Area Management Act program. Questionnaires were mailed to each of the 130 water users in the Town of which 22 were returned. The returned questionnaires were a major source of information for formulating the Town's goals and objectives. A sample questionnaire appears on the following page.

Three public meetings, held July 10, 1975, July 22, 1975, and August 11, 1975, were announced well in advance and an attempt was made to inform all local citizens of the meetings. Actual attendance at these meetings was limited to a few (4 to 5) interested citizens. However, those attending were instrumental in formulating the Town's goals and objectives. The Town Council and the Mayor of Holly Ridge were involved in the land use plan from the very beginning. The project planner met with the Town Council each month during the time period in which the plan was being prepared. Personal conversations with the Town Clerk were helpful in the plan preparation. The actual number of people participating in the land use plan was limited, but significant input was received from those who did participate.

IV. Constraints

A. Land Potential

1. Physical Limitations

Under the requirements of the Coastal Area Management Act, it is required that an identification shall be made of areas having conditions that would make development costly or that would create an undesirable effect if developed. Holly Ridge is homogeneous enough to be able to say that development constraints are almost identical throughout the Town. Although these constraints are not severe or even likely to influence development patterns, they do warrant consideration. Of primary concern are areas with soil limitations and sources of water supply.

a. Soil Limitations

Holly Ridge occupies land dominated by a soil association consisting primarily of the Lynn Haven, Pamlico, and Leon soil series. They occupy level and depressional areas and are prone to occasional to frequent flooding. Drainage in these soils is poor to very poor with moderate to slow permeability. A large percentage of this association has an organic hardpan underlying it. As in almost all coastal soil associations, included in the series can be small amounts of other soils with good development characteristics so spot site tests will always be advisable before any construction takes place. However, some general characteristics can be illustrated through the use of the chart on the following page.

b. Water Supply

Groundwater is the exclusive source of water to all users in Holly Ridge.

The hydrogeologic framework in which groundwater occurs here is briefly outlined. Potable groundwater occurs in the Post-Miocene Aquifer, the Castle Hayne Aquifer, and in the upper portion of the Cretaceous System Aquifer. The Post-Miocene Aquifer lithologically consists of unconsolidated sands which store water under water-table conditions; hydraulically connected to the Post-Miocene Aquifer is the Castle Hayne Aquifer, an artesian aquifer composed of mostly porous

Soil Interpretations

General Soil Map

Onslow County, N. C.

June, 1970

Soil Associations	Dwellings with			
	Sewerage Systems	Septic Tank Filter Fields	Camp Sites	Picnicking Areas
	% in Assoc.			
Holly Ridge				
Leon-Lynn Haven 10% of County	Leon Lynn Haven	70 10	Sev(Wt,Prod) Sev(Wt,Lfa)	Sev(Wt,Traf) Sev(Wt,Prod)

Slopes 10% impose limitations; 10-25%-Mod. 25%+-Sev.

Slopes 10% impose limitations; 10-15%-Mod. 15%+-Sev.

Slopes 6% impose limitations; 6-10%-Mod. 10%+-Sev.

Abbreviations for Limiting Factors:

Perc - Percolation rate
Sh-Sw Shrink-swell potential, R - Rock
ER - Erosion, FL - Flood Hazard, Prod - Productivity
Wt - Water Table, Traf - Trafficability,
Cor - Corrosion potential, AWC - Available water capacity, LFA - Low filtering action
TSC - Traffic supporting capacity

Abbreviations for degree

SLt. - Slight Mod.

1/ Structures whose footings

2/ Refers to roads and structures

limestone. Below the Castle Hayne Aquifer is the Cretaceous System Aquifer: potable water occurs under artesian conditions in the upper sand zones of the system aquifer.

Brackish groundwater exists in sands in the middle and lower portion of the Cretaceous System Aquifer.

The Post-Miocene Aquifer exists from land surface to approximately fifty feet below land surface (BLS); from fifty feet BLS to two hundred feet BLS is the Castle Hayne Aquifer. The Cretaceous System Aquifer exists from two hundred feet to approximately thirteen hundred feet BLS where basement is encountered.

The source of recharge to the Post-Miocene Aquifer is infiltration by precipitation; since the Post-Miocene Aquifer is probably connected to the Castle Hayne Aquifer, recharge of the Castle Hayne by vertical leakage from the upper Post-Miocene Aquifer is significant. Therefore, environmental facts which affect the Post-Miocene Aquifer also affect the Castle Hayne Aquifer.

Presently the Town of Holly Ridge pumps groundwater from a well-field located within the city limits. Three wells screened in the upper zone of the Cretaceous System Aquifer provide a satisfactory quantity and quality of water to all users. These wells when pumped probably affect the overlying Castle Hayne Aquifer only slightly if any at all.

The aquifer of environmental concern is the Post-Miocene Aquifer. Proper management of this aquifer is necessary to protect the usability of the aquifer and the underlying aquifer (Castle Hayne Aquifer) which receives recharge from the Post-Miocene. This need for management is made more necessary by the fact that future expansion of the Town of Holly Ridge would encourage the use of the more productive Castle Hayne Aquifer instead of the Cretaceous System Aquifer.

2. Areas with Resource Potential

West of U.S. Highway 17, adjacent to Holly Ridge, lies a natural and scenic area known as the Great Sandy Run Pocosin. This 63 square mile flat, swampy region has native trees of pond pine and scrub oak. It is presently used for forestry and big game hunting.

B. Capacity of Community Facilities

1. Water and Sewer Systems

The water system for Holly Ridge has a 360,000 gallons per day capacity. As of January 31, 1974, an average of 240,000 gallons were used per day. This water is available from two active wells with a combined output of 750 gallons per minute. There is, therefore, a substantial surplus of water available in Holly Ridge. In addition to the two active wells, Holly Ridge has access to seven more wells in the immediate vicinity if needed.

The sewer system in Holly Ridge was installed during 1943 and 1944 as a Public Works Project while the United States Army operated Camp Davis adjacent to the Town. The Camp Davis area, as well as Holly Ridge, is serviced by the lines. Within the Town limits, the system consists of approximately 1.5 miles of 8", 10" and 12" primary gravity collector lines constructed of vitrified clay pipes. Overall, the system is in poor condition due primarily to its age and lack of maintenance. Recent inspection of the system by Henry von Oesen and Associates indicates that infiltration through deteriorating joints in manhole walls is occurring throughout most of the system. Some infiltration through deteriorated pipe joints or broken pipe was also observed. Many of the manholes in the system have either damaged or missing rims, and many of the covers are made of materials other than standard cast iron.

Deterioration and infiltration can be expected to continue as the sewer system ages unless the system is repaired.

2. Wastewater Treatment Facility

Recent examination of the existing wastewater treatment facility has been conducted by Henry von Oesen and Associates. Their examination of the system indicates that the existing facility is extremely poor.

The existing treatment facility consists of a rectangular concrete septic tank followed by two sand filters with effluent discharge to Kings Creek. The septic tank's external dimensions are 71.5 feet long, 11.83 feet wide and 5.5 feet deep. The volume of the tank is 29,920 gallons. The plant was designed in 1943 by Paul M. Van Camp as a War Public Works Project.

Both the septic tank and the sand filters are in poor condition. Henry von Oesen and Associates report "that the septic tank is leaking at the effluent end. One effluent pipe is severed from the tank and the tank effluent is running across the ground for a distance of about three feet before flowing by gravity into an 8" cast iron line leading to the sand beds. There is no evidence that the tank has been pumped to remove sludge in recent months and the municipality has not kept any written records on maintenance of the system. Both of the sand filters are in a deteriorated condition with grasses, weeds and even small trees growing in the beds. Most of the septic tank effluent flows to the eastern most bed. That bed is completely plugged with solids affording little, if any, percolation. In fact, the bed is ponded with effluent flowing overland by gravity into Kings Creek. The effluent is not being chlorinated."

Influent and effluent grab samples were obtained for analysis from the Holly Ridge system on October 14, 1974. Analysis showed influent BOD₅ of 50 mg/l and COD of 66 mg/l. Effluent samples of BOD₅ were 44 mg/l and COD was 78 mg/l. The septic tank was providing a BOD₅ reduction of only 12 per cent and COD actually increased across the tank.

Overloading and lack of maintenance results in the discharge of poorly treated sewage into Kings Creek. This discharge has apparently caused widespread pollution of Kings Creek and the sound which Kings Creek drains into, Stump Sound. These areas have been classified as "SC-Swamp Water" by the State Division of Environmental Management which closes the water to both shellfishing and body contact activities by humans.

3. Schools and Roads

Holly Ridge children attend county schools; and, therefore, schools do not qualify as an existing community facility in the planning area. However, there has been much concern expressed over the inadequacy of the school facilities serving the Holly Ridge area - notably Dixon Elementary School. Consequently, growth in Holly Ridge will eventually put added pressure on the existing county school system. Holly Ridge should make efforts to stay in contact with the Onslow County Superintendent of Schools to discuss the affect of increased population on the area school facilities.

Roads are another community responsibility. In the areas designated by this planning effort for future development, road construction and maintenance will be required. Of the 73.6 acres of road right of way in Holly Ridge, 39.7 are unpaved. Road improvements may not necessarily preceed development. The precise amount of road construction needed for new growth shall be determined by the extent of such development.

V. Estimated Demand

A. Population and Economy

No planning effort can be thought adequate without consideration for possible population changes or desired growths. In Holly Ridge, or in any small town, population projections are difficult to make confidently due to the lack of a substantial base number with which to work. Any number of occurrences, social or economic, would likely invalidate a projection. This is especially true when working with the projection years emphasized by the State Guidelines for Planning under the Coastal Area Management Act. However, a method is used here that considers the Holly Ridge projection in light of population change of the entire township for the purpose of arriving at a reasonable figure for the Coastal Area Management Act.

A geometric population projection based on the three census counts made in Holly Ridge projects a population loss of 37.5% every ten years. As a result of this projection, Holly Ridge's population would be down to 259 in 1985 and by the year 2085, the population would be 0. Of course, the idea of this plan is to stop this trend. Anyway, this isn't a reasonable projection method because of the small size of the town.

Using township data since 1910, the geometric projection uses a 12.5% increase per decade. Using this percentage, Stump Sound Township would have a 1985 population of 6,238. The maximum optimistic projection for Holly Ridge would require using this same 12.5% figure. This is felt to be a reasonable method because there is no reason to believe that any other part of the township would grow faster than Holly Ridge except for the beach area. This geometric method results in the following population projection for Holly Ridge for the coming years.

Geometric Population Projection

<u>Year</u>	<u>Population</u>
1980	441
1985	467
2000	558
2025	750

A negative projection will not be used for this plan because in planning for future land demands, if there is a loss of population, basic costs and demands for community facilities would be less than they are at the present time. No increase in demand for facilities implies that if current facilities are adequate, they will still be adequate in the future with just normal maintenance. But, since Holly Ridge is embarking on a development oriented journey, population should increase. For this reason, a projection showing an increase in population should be used. Furthermore, since no other reasonable figures are available, the township rate will be used. Hopefully, however, this rate (12.5%) is also an underestimation. Holly Ridge needs to meet its development goals by 1985; not in fifty years.

Two small industries located in the Holly Ridge area in the early 1970's. If more industry is expected to locate in Holly Ridge, an improved wastewater treatment system must be installed in the Town to attract new industry. New retail businesses also require an efficient wastewater system.

B. Future Land Needs

The most evident characteristic of Holly Ridge as seen from the existing land use map is that most of the Town is undeveloped. Since Holly Ridge has expressed the desire to maintain its present character even in the event of increased economic activity, it seems appropriate to encourage development in the undeveloped area in the same proportions as in the developed area. This would increase the density of the town at the expense of maintaining its exact character but the overall effect wouldn't be too drastic. It may be necessary to develop more intensely further in the future and then expand as needed.

Of the total land area of 259 acres, Holly Ridge contains 122 acres of undeveloped land. The following table lists the present acreage of each land use category and its percentage of the developed area. Also shown is the additional acreage needed for the future if each category is developed by its present percentage.

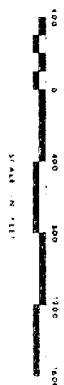
Future Land Needs

<u>Land Use</u>	<u>Present Acreage</u> <u>+ %</u>	<u>Additional Acreage</u> <u>+ %</u>
Residential		
Single Family	29.33 (21.4%)	26.1 (21.4%)
Multifamily	21.49 (15.7%)	19.1 (15.7%)
Commercial	6.3 (4.6%)	5.6 (4.6%)
*Transportation, Communication and Utilities	3.1 (2.2%)	2.7 (2.2%)
Government and Institutional	3.2 (2.3%)	2.8 (2.3%)
Cultural, Entertainment and Recreation	.18 (.13%)	.15 (.13%)

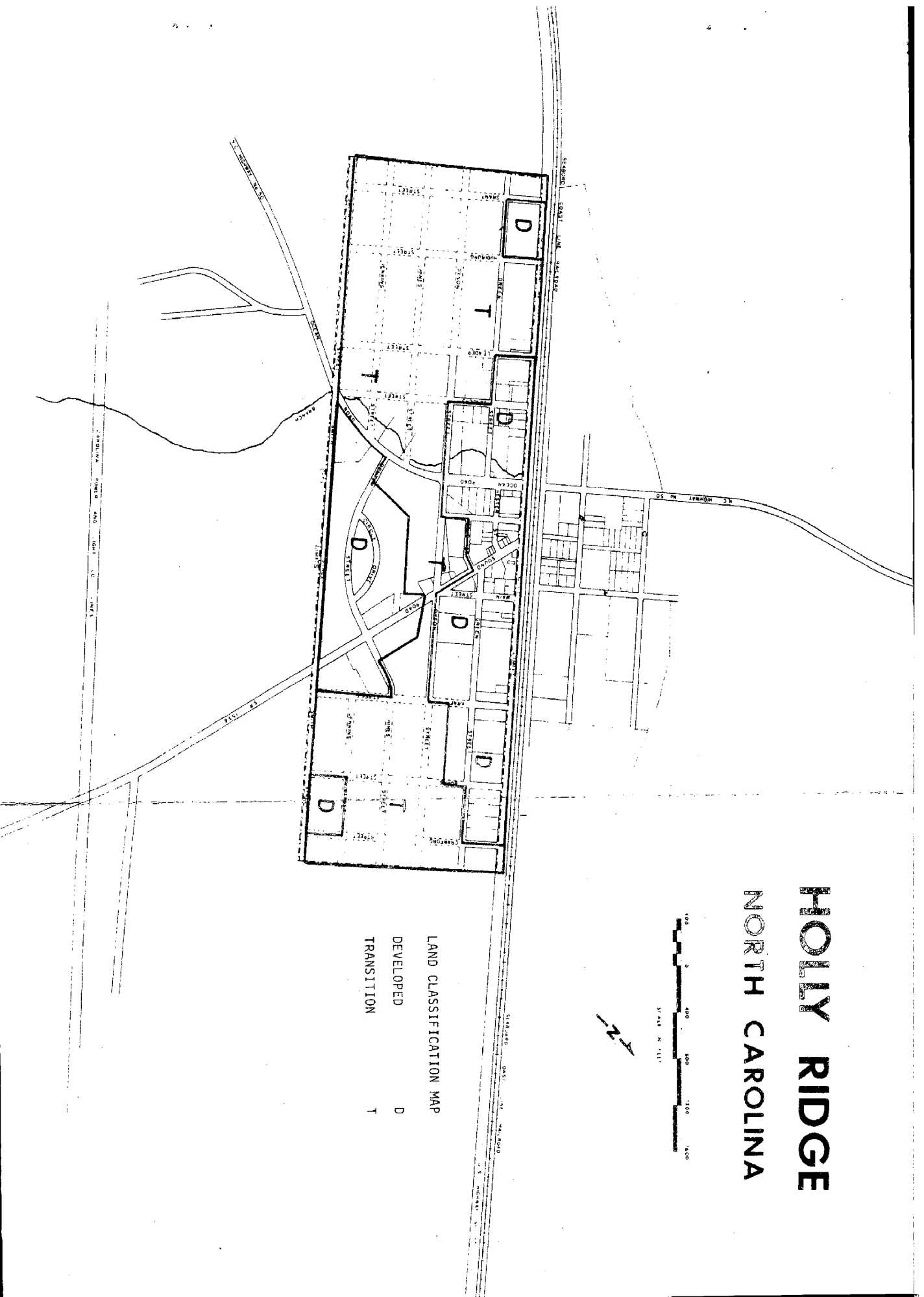
*Street right-of-way acreage was excluded from Transportation, Communication and Utilities category in this table because present acreage is considered adequate for future growth.

This leaves 65 acres still undeveloped in the town which can be dedicated to a new use, increase in existing land uses, or set aside in a holding category until a need is seen for development. If soil conditions allow it, a new use should be light industrial to realize the first objective formulated by the town. An industry requiring extensive construction or that which produces significant waste products is not recommended. An increase in commercial land use, another objective, can be accommodated within the undeveloped area also, but it might be more appropriate to concentrate such activity in or near the existing commercial area. There are some structures that would have to be torn down or renovated in that area, but there is also ample space for parking and the location is convenient. Land designated to a holding category can serve as a buffer between non-compatible uses or can be held until more enlightened decisions can be made regarding the best categorization for that land. A combination of these alternatives for the 65 acres is seen as the best choice. The future land use map illustrates one way that development could go in Holly Ridge, but any alternative that results in the same land proportions would be appropriate to reaching the objectives established. These should be regarded as general suggestions or guides only. Exact boundaries or densities would only be determined in a Zoning Ordinance after success or failure to reach development goals. Also, this map can't be regarded as a zoning map but just an example of how land could be allocated to various uses. Exact decision will be made through the traditional process but the guides established here will help in making those decisions much more intelligently.

HOLLY RIDGE NORTH CAROLINA



LAND CLASSIFICATION MAP
 DEVELOPED D
 TRANSITION T



C. Community Facilities Demand

To meet the needs that future development will demand, Holly Ridge must extend some of its basic services. Water and sewer facilities should be available to all residents. The wastewater treatment plant is inadequate to meet present needs, therefore, it definitely will not be able to handle the additional waste that accompanies development. A revised 201 Facilities Plan, drafted by Henry von Oesen and Associates, is to be submitted to the Division of Environmental Management, Department of Natural and Economic Resources in the summer of 1976. Examination of the existing wastewater treatment plant in Holly Ridge indicates that the system will have to be abandoned and a new system designed. The estimated cost of a proposed wastewater treatment system has been as high as \$650,000 with the local share being as high as \$200,000. Due to this high cost, other methods of wastewater treatment are being looked into.

VI. Land Classification

The State guidelines for Local Planning in the Coastal Area under the Coastal Area Management Act of 1974 requires that a land classification map be prepared for all planning jurisdictions in the coastal area. There are five classes of land prescribed in the North Carolina Land Classification System:

- A. Developed - Land with a minimum density of 2000 people per square mile (3.124/acre) and containing public services able to support the present population. This land must be serviced by water and sewer systems and adequate road and educational systems.
- B. Transition - Land where a minimum density of 2000 people per square mile is expected in the future and where minimum services will be required. Areas with several development limitations or ones of significant special value would not be included in this category.
- C. Community - Existing low density land that doesn't require major public services. This class includes all new rural growth of lot sizes of 10 acres or less. Approximately one person per acre should be used as a guide in identifying this land.
- D. Rural - Land used for management and utilization of productive resources and where limited public services will be provided. Generally, large tracts of land not expected to develop more intensely than agriculturally would be considered in this category.
- E. Conservation - This last class identifies land to be maintained for its natural qualities and least desirable for development. These areas wouldn't be able to withstand development without loss of natural value, have severe limitations for development, or are too valuable to be endangered by it.

Holly Ridge's density in developed areas is 3.03 persons per acre. This is just short of the 3.125 persons per acre required for the Developed category of the Land Classification System, but it is felt to be close enough to qualify for purposes of this plan. Furthermore, all lands projected for future development in Holly Ridge can be classified in the Transition class using this same density. Land remaining will be designated into one of the other three categories at a time when new development patterns emerge and indicate the necessity and exact location of such designations.

VII. Areas of Environmental Concern

Areas of Environmental Concern include marshlands, beaches, and dunes, navigable waters, national and state parks and areas of historical importance. None of these areas exist within the Town limits of Holly Ridge.

VIII. Implementation and Review

Because of the small size of the Town of Holly Ridge and the limited funds the Town has to work with, it is felt that Holly Ridge should cooperate with Onslow County in the implementation and review of its land use plan. A joint program should be established between the Town and the County whereby the County Building Inspector would also inspect the houses within the Holly Ridge town limits. It is also recommended that the Town cooperate with the Onslow County Recreation Department in providing recreational programs and facilities for the residents.

IX. Summary

The data necessary to compile this land use plan came from many sources and through the aid and cooperation of many people. Among them are the Mayor of Holly Ridge, A. P. Snodgrass and the Town Clerk, Pat McLamb. Population data contained in the plan was obtained from Statistical Summary, Onslow County, North Carolina prepared by the Onslow County Planning Department in May, 1972. Soil conditions and areas with resource potential descriptions were obtained in An Appraisal For Outdoor Recreational Development in Onslow County, North Carolina, published by the Soil and Water Conservation District, May, 1974. The source of water supply information for Holly Ridge came from Richard Shiver, Regional Hydrologist, North Carolina Department of Natural and Economic Resources, Wilmington, North Carolina. Information on the existing wastewater treatment facility now in operation in Holly Ridge was obtained from the 201 Facilities Planning Report, December, 1974, prepared by Henry von Oesen and Associates in Wilimington, North Carolina and from Tyndall Lewis, Regional Engineer, Water Quality Section, Division of Environmental Management, Department of Natural and Economic Resources.

X. City-County Coordination

City-County coordination in formulating the land use plans for Holly Ridge and Onslow County was achieved through informal meetings between the planners. A joint city-county public hearing for the Towns of Richlands, Holly Ridge and Swansboro and Onslow County was held in the Superior Court Room of the Onslow County Courthouse on May 13, 1976.

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